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## WHAT IS CLAIMED IS:

- A contact pesticidal composition for the control of mites comprising, in admixture with an acceptable carrier, at least one plant essential oil compound or derivative thereof.
- 2. The pesticidal composition of claim 1, wherein the plant essential oil or derivative thereof, comprises a monocyclic, carbocyclic ring structure having six-members and substituted by at least one oxygenated or hydroxyl functional moiety.
- 3. The pesticidal composition of claim 1 wherein the plant essential oil compounds or derivatives thereof are selected from the group consisting of aldehyde C16 (pure),  $\alpha$ -terpineol, amyl cinnamic aldehyde, amyl salicylate, anisic aldehyde, benzyl alcohol, benzyl acetate, cinnamaldehyde, cinnamic alcohol, carvacrol, carveol, citral, citronellal, citronellol, p-cymene, diethyl phthalate, dimethyl salicylate, dipropylene glycol, eucalyptol (cineole) eugenol, iso-eugenol, galaxolide, geraniol, guaiacol, ionone, menthol, methyl anthranilate, methyl ionone, methyl salicylate,  $\alpha$ -phellandrene, pennyroyal oil perillaldehyde, 1- or 2-phenyl ethyl alcohol, 1- or 2-phenyl ethyl propionate, piperonal, piperonyl acetate, piperonyl alcohol, D-pulegone, terpinen-4-ol, terpinyl acetate, 4-tert butylcyclohexyl acetate, thyme oil, thymol, metabolites of trans-anethole, vanillin, and ethyl vanillin.
- 4. A fumigant pesticidal composition for the control of mites comprising, in admixture with an acceptable carrier, at least one plant essential oil compound or derivative thereof.
- 5. The pesticidal composition of claim 4, wherein the plant essential oil or derivative thereof, comprises a monocyclic, carbocyclic ring structure having six-members and substituted by at least one oxygenated or hydroxyl functional moiety.
- 6. The pesticidal composition of claim 4 wherein the plant essential oil compounds or derivatives thereof are selected from the group consisting of aldehyde C16 (pure),  $\alpha$ -terpineol, amyl cinnamic aldehyde, amyl salicylate, anisic aldehyde, benzyl alcohol, benzyl acetate, cinnamaldehyde, cinnamic alcohol, carvacrol, carveol, citral, citronellal, citronellol, p-cymene, diethyl phthalate, dimethyl salicylate, dipropylene glycol, eucalyptol (cineole) eugenol, iso-eugenol, galaxolide, geraniol, guaiacol, ionone, menthol, methyl anthranilate, methyl ionone, methyl salicylate,  $\alpha$ -phellandrene, pennyroyal oil perillaldehyde, 1- or 2-phenyl ethyl alcohol, 1- or 2-phenyl ethyl propionate, piperonal, piperonyl acetate, piperonyl alcohol, D-pulegone, terpinen-4-ol, terpinyl acetate, 4-tert butylcyclohexyl acetate, thyme oil, thymol, metabolites of trans-anethole, vanillin, and ethyl vanillin.
- 7. A method for controlling mites in stored food products, which comprises applying to the locus where control is desired a pesticidally-effective amount of the composition of claim 1.